Application No: 10/590,117 File No.: 5007653.001US1

Response to 5/18/2009 Final Office Action

## **Amendments to the Claims:**

Claims 1-10 (Canceled).

11. (New) A method for measuring ultrahigh vacuum, the method comprising the steps of:

- (a) providing an ultrahigh-vacuum cold cathode pressure gauge comprising any one of a magnetron pressure gauge or a Penning pressure gauge;
- (b) subjecting the ultrahigh-vacuum cold cathode pressure gauge to a magnetic field of between about 0.05 tesla (T) and about 1.5 tesla (T);
- (c) applying in a substantially linear with time increasing manner a voltage on an anode of the ultrahigh-vacuum cold cathode pressure gauge from between about 1 kV and 12 kV;
- (d) measuring an anode current corresponding to the applied voltage;
- (e) storing the measured current and corresponding applied voltage values;
- (f) determining the maximum current and corresponding applied voltage values from the stored values;
- (g) setting the voltage on the anode to the level, at which the current is substantially at its maximum value; and
- (h) storing the voltage, at which the current is substantially at its maximum value in a database as the optimal voltage for a given pressure to be used as calibration.

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12. (New) A device for measuring ultrahigh vacuum, the device comprising:

- (a) an ultrahigh-vacuum cold cathode pressure gauge comprising any one of a magnetron pressure gauge or a Penning pressure gauge, where said ultrahigh-vacuum cold cathode pressure gauge in the ultrahigh-vacuum cold cathode pressure gauge is configured to be capable of being subjected to a magnetic field of between about 0.05 tesla (T) and about 1.5 tesla (T);
- (b) a voltage-source configured to be capable of providing between about 1 kV and 12 kV, said voltage-source being in electrical communication with an anode of the ultrahigh-vacuum cold cathode pressure gauge;
- (c) a controller configured to be capable of controlling the voltage-source so that the to voltage-source is capable of providing the anode a voltage between about 1 kV and about 12 kV in a substantially linear with time increasing manner;
- (d) an ammeter configured to be capable of measuring and storing values of an anode current corresponding to the provided voltage;
- (e) a means for determining the maximum current and corresponding applied voltage values from the stored values;
- (f) a means for setting the voltage on the anode to the level, at which the current is substantially at its maximum value; and
- (g) a means for storing the voltage, at which the current is substantially at its maximum value as the optimal voltage for a given pressure to be used as calibration.